

FIG. 35. Mature larva of *P. edentulus* Lec.

FIG. 36. Mature larva of *H. ruficollis* DeG.

FIG. 37. Larva of *P. muticus* Lec. in its pupal chamber.

FIG. 38. Pupa of *P. muticus* Lec.

PLATE XV.

Elytra of the various species of *Haliphus*, *Peltodytes* and *Brychius*.

MISCELLANEOUS NOTES.

Larva of *Brachys* in Oak Leaf.—In November, 1911, Mr. Wm. T. Davis and I found, near Lakeland, Fla., several Buprestid larvæ concealed between the upper and lower surfaces of old partly dried oak leaves, apparently mining the leaves. Our attention was attracted by a swishing noise coming from leaves beaten into the umbrella, which, on holding a leaf to the light, was found to be caused by the larva moving its head rapidly from side to side, and thus rubbing against the inner surface of the cell in which it was concealed. Later more were detected on the trees by the noise they made, but they were not numerous, nor was it easy to ascertain the particular leaf from which the noise came. The oak was identified by Mr. Davis at the Turkey Oak (*Quercus catesbæi*); the beetles emerged in May, 1912, from leaves brought home to Staten Island, and prove to be *Brachys ovata*.—CHAS W. LENG.

Male of *Heliocheilus lupatus*.—*Heliopsis lupatus* Grot. was founded on a ♀ only; the characteristics of the genus *Heliocheilus* are well defined only in the male. Hampson in the Catalogue of the Lepidoptera Phalænæ places *lupatus* in *Heliocheilus* (treated as a sub-genus) with only the female before him. There is a ♂ in the American Museum of Natural History from Tryon, N. C., showing the characters of *Heliocheilus* very well, but somewhat less developed than in *H. paradoxus*. The foveæ on the forewing are present but largely (probably when fresh, fully) scaled. The modification of the costa is similar.

The fore tibiæ in this series are unsatisfactory for determination of genera, and I doubt if *Heliocheilus* can be held distinct from the tropical *Raghuva* and several other genera may be best united with *Heliopsis* (*Chloridca*).

In the material before me *H. armiger* has three or four graded outer spines and one inner, tibia almost as long as first joint of tarsus, and long claw two fifths as long. *H. dipsacea* is more generalized, with longer tibia, shorter long claw and five outer spines in all. *H. ononis* has two series of spines, varying toward the lower forms.

Heliocheilus has become more specialized; in *H. paradoxus* the fore tibia is decidedly shorter than the first joint of the tarsus, flattened, with much larger terminal claws and only one spine high up in the tuft of scales. *H. lupatus* is quite similar. *Chloridea* as typified by *virescens* is quite like *H. dipsacea*.

Heliocheilus may stand then as rather unsatisfactory genus, defined by the lack of spinules on the fore tibiæ, and sexual modification (usually or always?) associated with sound-production in the male.—WM. T. M. FORBES.

Baiting for Beetles at Eagle Rock.—About the 1st of May, 1909, while collecting butterflies and beetles at Gt. Notch, N. J., I came across a half pint cream bottle that had been discarded by some picnickers the previous summer and which was literally filled to the brim with beetles of several species but mostly *Geotrupes splendidus*, *Necrophorus tomentosus* and *marginatus* and some smaller species. I emptied the contents of the bottle carefully on paper and examined the insects, but they were so old and brittle and packed so closely that it was impossible to get a single specimen fit to pin. I did not then have a specimen of *Geotrupes splendidus* in my collection, so decided to bury a number of bottles somewhere in the Orange Mts. the following September and try to secure a good series. Saturday, September 3, I went to Eagle Rock and buried a dozen bottles a little back from the road among the bushes and all within a half mile of the Rock.

The bottles were buried so the opening would be level with the ground and most of them had about a quarter of an inch of condensed milk in the bottom; some had first a layer of earth and then the condensed milk and three or four contained a little of the sugaring mixture that I had often used for sugaring at night for moths, consisting of beer, molasses, and sugar and a little asafoedita, to give it a strong odor.

The bottles were in the ground a full week and then I journeyed to Eagle Rock anxious to see if my experiment had proved a success. The first bottle examined contained several *Geotrupes* and a number of common *Carabidæ* and I was much pleased and knew at once that my hopes would be more than realized. Every bottle examined contained from one to six or eight *Geotrupes* in addition to a number of other species. One contained a mouse in an advanced stage of decomposition and in that bottle I obtained a number of *Necrophorus tomentosus*. After examining the contents of each bottle carefully it was rebaited and left to be looked at the following week.

In all I made three trips to gather the specimens, viz. September 10 and 17 and October 8, and as I had then collected as many of the *Geotrupes splendidus* as I could handle, in addition to numerous other specimens, did not care to continue the experiment further. In all several hundred beetles were taken, of which the following species were the most interesting to me: *Geotrupes splendidus*, of which I took in all 80 specimens, *Geotrupes cgerici*, *Myas coracinus*, and *Cymindis cribricollis*.

The bottles containing the condensed milk proved to be the most attractive and contained the greatest number of beetles, most of which were dead when examined but in good condition. In the bottles with earth in the bottom the *Geotrupes* had buried themselves in the dirt and were alive when taken and the bottles containing the syrup had only a comparatively few insects in them.

In baiting for beetles near Washington, D. C., I have always found the sugaring material by far the best bait and have abandoned the use of condensed milk entirely.—ERNEST SHOEMAKER.

BOOK NOTICE.

Genera Insectorum, dirigés par P. WYTSMAN, 103me Fascicule. Lepidoptera, Heterocera, Family Geometridæ, by LOUIS P. PROUT. 1910.

It is always a pleasure to see a needed piece of work well done, and probably there is nothing more desirable at present than a revision of the world's genera of Geometridæ, and certainly it could not have been better executed than by Mr. Louis B. Prout in *Genera Insectorum*.